

REMARKS

By this Amendment, claims 12, 21 and 26 are amended to merely clarify the recited subject matter and remove the noted objectionable material. Claims 1, 3-12, 14, 18-19, 21, and 23-30 are pending.

The Office Action has recognized that claims 5, 7-12, 19, 21, 25 and 30 include allowable subject matter but rejected claims 1, 3, 4 , 6, 12, 14, 21, 23, 24 and 26-28 under 35 U.S.C. 103(a) as being unpatentable over subject matter identified by the Office Action as Applicant's Admitted Prior Art "AAPA" in view of Siu (U.S. 6,252,851), Zhang (U.S. 6,396,833), and further in view of newly cited reference, Chow (U.S. 5,495,471). Applicants traverse the rejection because the subject matter included in the "Background of the Invention" section of the application is not prior art and, even if it was, the AAPA in combination with the cited prior art references fail to disclose, teach or suggest the claimed invention.

**Applicants' "Background of the Invention" Is Not Prior Art**

The Office Action concluded that the "Background of the Invention" section of Applicants' specification constitutes an admission of prior art by the Applicants. However, the concatenation of three legs so that first and third connection leg supports flow control on a lower transmission protocol level underlying a user level, and an intermediate second connection leg does not support flow control on the lower transmission level, was not recognized in the prior art at the time of the invention. Rather, the description on pages 2-4 were expressly identified as background of the invention in that the subject matter included in that section of Applicant's specification merely provide the Applicants' own example scenario of the system development and the problems that would be anticipated if the scenario (used as the example) was realized. Thus, the background art was nothing more than the Applicants' own anticipation of future systems and their associated problems. Accordingly, the Applicants' own work should not be treated as "prior art" solely because it is described in the application to facilitate understanding of the present invention.

**Alleged AAPA in Combination With Cited Prior Art**  
**References Fails to Teach or Suggest Claimed Invention**

Moreover, even if the alleged AAPA had been prior art to the public in general, which it was not, the present invention as claimed would still have been patentable over the AAPA in view of Siu and further in view of Zhang and Chow because their combined teachings fail to disclose, teach or suggest the claimed invention. For example, those teachings fail to disclose, teach or suggest present invention wherein lower layer flow control information of other legs is tunneled through the intermediate leg.

Siu teaches a method for regulating TCP flow over heterogeneous networks, i.e., networks with different bandwidth characteristics. For example, TCP traffic may travel from an IP network to an access network that uses a different link layer technology, such as Asynchronous Transfer Mode (ATM). As a result, congestion can occur at the network edge. To alleviate this problem, Siu teaches introducing an edge router at the network edge regulates the TCP traffic from the source to the edge router by regulating the rate at which the acknowledgements arriving from the destinations are forwarded to the source. If the forwarding of the acknowledgement to the source is delayed, new packets will arrive from the source at a lower rate, which avoids overflow of the buffer in the edge router.

Thus, Siu teaches flow control of TCP traffic by regulating the rate at which the packet acknowledgements are forwarded to the source. However, Siu fails to teach or suggest lower layer flow control between the edge router and the source, and extending the lower layer flow control over the ATM network to a next connection leg so as to provide an end-to-end lower layer flow control over at least three connection legs. Further, Siu fails to teach suggest tunnelling the flow control data of other legs through the intermediate ATM leg.

As a result, the Office Action asserted that one of ordinary skill in the art would have turned to the teachings of Zhang, which relates to use of routing tables in routing of TCP/IP protocol packets through the Internet. When receiving a packet from a user, a gateway selects a user-specific routing table based on the source address of the packet. The gateway then selects from the table a network address based on the destination address of the packet and forwards the packet to the selected network address. The gateway may also use tunnelling for forwarding the packet to the selected network address. This tunnelling is carried out on the TCP/IP level.

Thus, Zhang teaches tunnelling of TCP/IP packets by encapsulating them to other TCP/IP packets having destination addresses obtained by the network address translation (NAT). However, that functionality is irrelevant to tunnelling lower level flow control information through an intermediate leg not supporting the lower level flow control. Although the Office Action referred to column 6 lines 11-13 of Zhang, that particular passage merely relates to tunnelling of user packets by a suitable tunnelling protocol such as PPP or L2TP.

Therefore, modifying the teachings of Siu based Zhang would merely have resulted in use of network address translation for TCP/IP user packets in Siu. However, it would not have resulted in any modification of the flow control of Zhang, which is based on regulating the transmission rate of acknowledgement packet to the source.

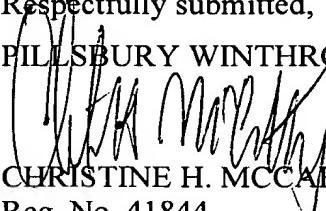
Moreover, applying the combined teachings of Siu and Zhang to the subject matter identified by the Office Action as AAPA, would have merely resulted in the user layer TCP/IP protocols, flow control and tunnelling being applied on higher layers than those illustrated in protocol stacks of the example shown Figures 2 and 3 in the present application. As a result, the combined teachings would fail to make any measures to provide end-to-end flow control over connections having at least three legs of which the intermediate leg does not support the lower layer flow control. Accordingly, there would have been no teaching or suggestion of the present invention wherein lower layer flow control information of other legs is tunnelled through the intermediate leg.

All objections have been addressed. If anything further is necessary to place the application in condition for allowance, Applicant requests that the Examiner contact Applicant's undersigned representative at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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